Small Business Innovation Research/Small Business Tech Transfer

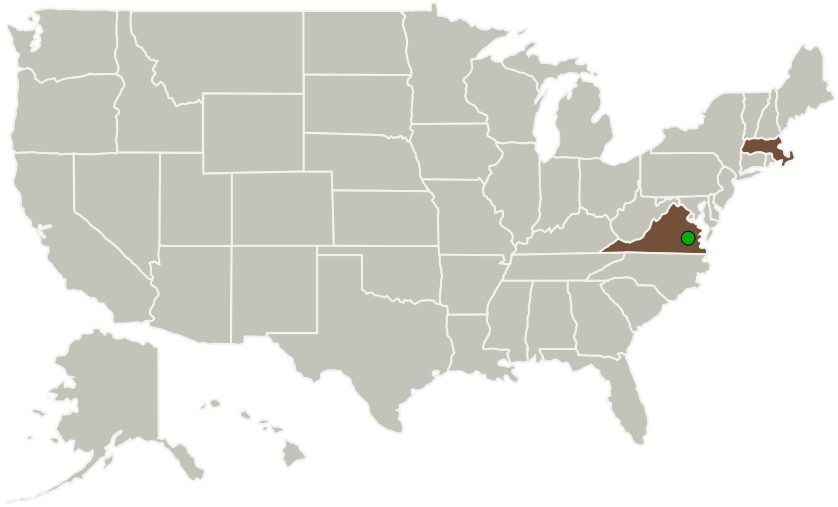
Compact 2050 nm Semiconductor Diode Laser Master Oscillator, Phase I

Completed Technology Project (2010 - 2010)

Project Introduction

This Phase I effort seeks to develop DFB laser master oscillators at the novel wavelength of 12050 nm. Two prototypes will be built, tested, and delivered . Currently, DFB laser chips are not available COTS at this wavelength. However, EM4 has identified a stock of devices that may be used for initial proof-of-concept testing. Due to the very large size of optical isolators at this wavelength, an isolator will not be included in the package.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
EM4, Inc.	Lead Organization	Industry	Bedford, Massachusetts
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations	
Massachusetts	Virginia

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Table of Contents

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Project Transitions

January 2010: Project Start

July 2010: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138876)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

EM4, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

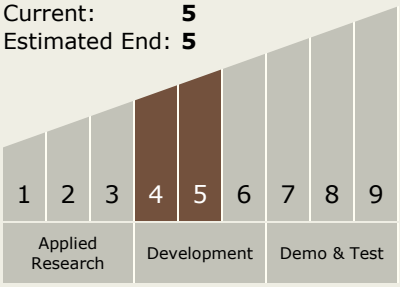
Carlos Torrez

Principal Investigator:

Alexander Rosiewicz

Technology Maturity (TRL)

Start: **4**
Current: **5**
Estimated End: **5**



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Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System